

REMARKS

The application has been amended and is believed to be in condition for allowance.

Claims 1-7 remain pending in this application. Claims 8-18 are new. Claims 1, 4, and 7 are independent.

The claims have been amended based on the disclosure found in the originally filed specification and as illustrated by the drawing figures. No new matter was added by way of these amendments.

A review of the invention will be helpful. Figure 1 illustrates a portable terminal device 1 comprising an image control processing section 11, a light control section 12, a light section 13, a camera control section 14, a camera section 15, and a recording medium 16.

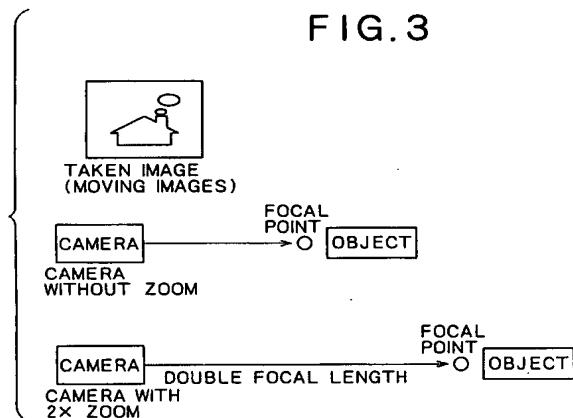
The light section 13 can emit light with arbitrary illuminance, i.e., intensity output.

Figure 2 is a sequence chart showing the operation of each part of the portable terminal device. The zoom information is a control signal corresponding to an optical zoom value and a digital zoom value. The light illuminance (intensity output) is varied in accordance with a distance from the device to an object based on the zoom information. The light control section 12 carries out illuminance intensity output control on the light section 13 in accordance with the zoom value.

Additionally, the light control section 12 varies the

illuminance intensity output in accordance with image processing data (a13 of Fig. 2; see also Figure 5). Here, varying the illuminance intensity output in accordance with image processing data further corrects the variation in the illuminance already made on the basis of the zoom value. Thus, as described above, the illuminance intensity output is varied in accordance with the zoom information, and then is further corrected in accordance with the image processing information, in order to carry out light control appropriate to the distance from the device to the object.

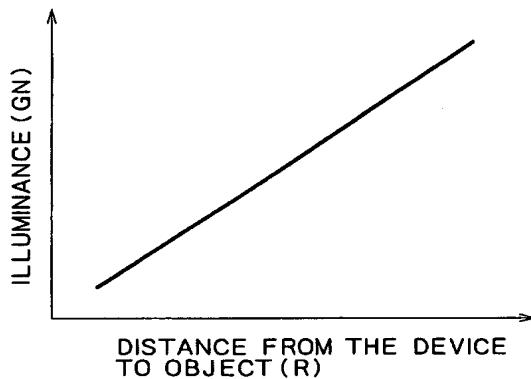
FIG. 3



Reference is made to Figure 3 graph showing the relation between the distance from the device to the object and the illuminance intensity output from the inventive device. Figure 3 shows an image photographed in an original position without zoom, and an object twice away from the original position using a 2x zoom. Zooming changes a focal length, and to take an image having the same brightness as that without the zooming, it

is necessary to double the illuminance intensity output from the camera during photo exposure.

FIG. 4



Also see specification page 9, beginning at line 23 disclosing that the proper intensity of light (GN) is determined by an f-number (F) for adjusting an amount of light entering a lens aperture, and distance (R) from the camera to a object. For a fixed f-number, the illuminance for taking an image of proper brightness is shown in Figure 4.

The invention also provides for a further refinement of the illuminance intensity control using information on the imaging processing. This is disclosed at page 6, beginning with line 17; page 8, beginning with line 6; and page 10, beginning with line 3.

From page 6, it is disclosed that the image control processing section 11 sends the zoom information (optical zoom) to the light control section 12, simultaneously with sending the

zoom information (optical zoom) to the camera control section 14. Moreover, the image control processing section 11 sends the image processing information, including digital zoom information and shades and outlines of an image, to the light control section 12. These types of information are used for controlling the light illuminance in stages in the light control section 12. From page 8, it is disclosed that the light control section 12 varies the illuminance in accordance with image processing data (a13 of Fig. 2), and an image is taken again in that state (a14 of Fig. 2). Here, varying the illuminance in accordance with image processing data further corrects the variation in the illuminance already made on the basis of the zoom value.

Beginning with line 3 of page 10, it is disclosed that if the f-number is fixed, the relation between the distance from the device to the object and the illuminance for taking an image of proper brightness is shown in Figure 4. In the light control section 12, an illuminance value is determined by the inclination (coefficient of "a") of a straight line shown in Fig. 4 and the zoom value sent from the image control processing section 11. The image processing information involves, for example, edge detection, cluster comparison, and obtained image processing data is compared with and judged by the information (threshold values) kept in advance. The light control section 12 adjusts the light illuminance based on judgment results from the image control processing section 11. As shown in Figure 5, the illuminance is

increased (step S6 of Fig. 5) or the illuminance is decreased (step S8 of Fig. 5).

The new claims reflect these features of the invention.

These approaches of the invention are not taught or suggested in the prior art.

Formal Matters

Claims 4-7 were rejected under 35 U.S.C. §112, second paragraph as being indefinite. More specifically, the Office Action alleges that claims 4 and 7 are improper hybrid claims, citing MPEP 2173.05(p).

Applicant respectfully disagrees. The use of hybrid claims is not per se indefinite. As stated in *IPXL Holdings v. Amazon.com, Inc.*, 430 F.2d 1377, "A claim is considered indefinite if it does not reasonably apprise those skilled in the art of its scope. *Amgen, Inc. v. Chugai Pharm. Co.*, 927 F.2d 1200, 1217 (Fed. Cir. 1991)." As to claim 4, the claim viewed as a whole is unambiguously a single-step method claim, and reasonably apprises "those skilled in the art of its scope" as required under *IPXL Holdings v. Amazon.com*. Furthermore, it is long accepted that it is proper to have apparatus limitations within a method claims so long as the claim remains clear.

Accordingly, Applicant believes that this rejection of claim 4 is improper. However, in order to advance the case, and without prejudice, the claims have been amended.

Similarly, claim 7, when viewed as a whole, is unambiguously, and reasonably apprises "those skilled in the art of its scope."

Thus, Applicant believes that this rejection of claim 7 is also improper, and should be withdrawn.

Withdrawal of the rejection is solicited.

Claims 4-7 were also rejected under 35 U.S.C. §101 as not being directed to statutory subject matter. This rejection has been carefully considered, and Applicant respectfully traverses this rejection.

Applicant respectfully disagrees as each claim requires an illuminance variable step for varying illuminance output of a light module of a camera in accordance with a distance from the camera module to an object. This produces a tangible result which satisfies §101.

Accordingly, withdrawal of this rejection is solicited.

Substantive Matters

Claims 4-7 were not substantively rejected, and are believed allowable for the reasons discussed below. The new claims are also believed allowable for the reasons discussed below.

Claims 1-3 were rejected under 35 U.S.C. §103(a) as obvious over EMME 2003/0122957 in view of OKUMURA 6,327,434.

This rejection has been carefully considered, and Applicant respectfully traverses this rejection.

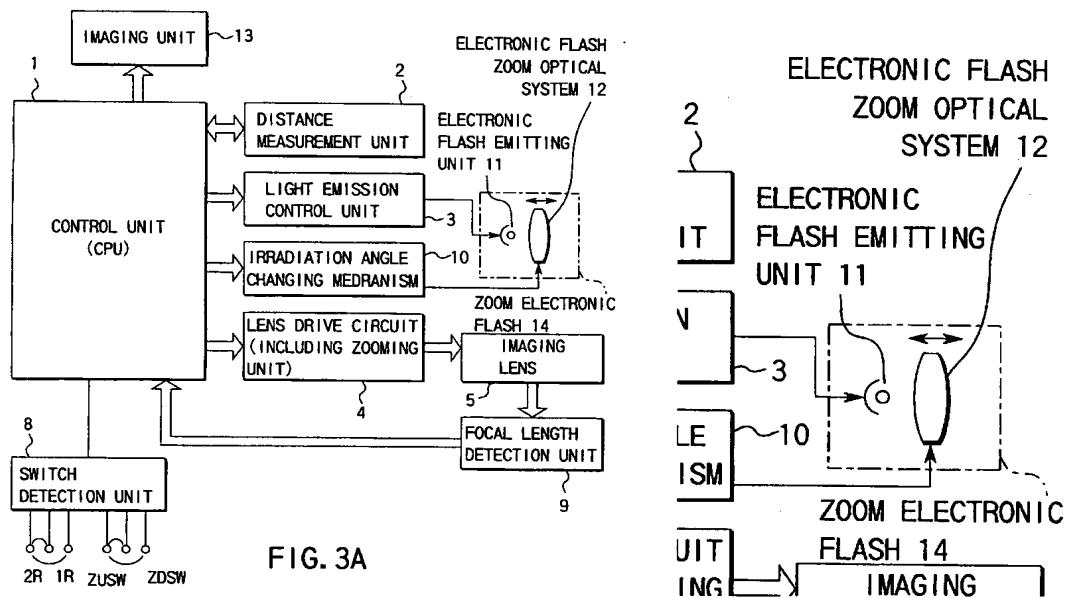
Claim 1 recites a portable terminal device comprising an illuminance variable section for varying illuminance intensity output of the light module in accordance with a distance from the camera module to an object.

Thus, to render this claim obvious, the proposed combination must teach this feature.

The proposed combination would not teach a terminal device that varies illuminance intensity output of a light module based on the distance from the camera module to an object. Accordingly, the obviousness rejection is not well founded and should be withdrawn.

EMME discloses a portable communications terminal with a digital camera and an infrared port. The infrared light emitted by the infrared port can be used to capture images with the infrared light. See Abstract. In operation, an "LED emits a beam of infrared light through cover 60...." See paragraph [0035]. The lens can be used "to capture images with infrared light." See paragraph [0041].

OKUMURA discloses a camera having an electronic flash 11 with an electronic flash zoom optical system 12 for changing the irradiation angle of the light emitted. See Figure 3A below and an enlarged portion thereof showing the zoom optical system 12. In OKUMURA, the illuminance intensity output of a light module is kept constant, and the irradiation angle is varied.



Based on this teaching, incorporating OKUMURA into EMME would result in a terminal having a built in flash, the flash having an electronic flash zoom optical system 12.

However, OKUMURA does not teach varying illuminance intensity output of the light module in accordance with a distance from the camera module to an object, as per claim 1. Nor is there any teaching of varying the illuminance intensity output of the light module during photo exposure in accordance with a zoom ratio, as per claim 2. Still further, there is no teaching of further varying the illuminance intensity output during photo exposure in accordance with information on the image processing. Nor would there be any teaching that satisfies the new claims.

Rather, it is repeatedly stated in OKUMURA that the irradiation angle of the light source is what is changed. See, for example, column 7, lines 40-50 and column 8, lines 17-23.

In contrast, claim 1 requires that the illuminance intensity output of the light module to be variable in accordance with a distance from the camera module to an object, the zoom ratio, and the image processing information. See application Figure 4. The dependent claims also require varying the illuminance intensity output during photo exposure in accordance with a zoom ratio, and in accordance with information on the image processing.

Further, neither reference teaches wherein the illuminance variable step further varies the illuminance intensity output during photo exposure in accordance with information on the image processing, said information including shades and outlines of an image to be photographed; said information including edge detection of an image to be photographed; or said information including cluster comparison of an image to be photographed.

Thus, the recited invention would not be taught or suggested by the proposed combination, and the obviousness rejection should be withdrawn. Withdrawal of this rejection is therefore respectfully requested.

In view of the references not rendering the claimed invention obvious, allowance of all the claims is respectfully solicited.

In view of the above amendment and remarks, Applicant believes the pending application is in condition for allowance.

Should there be any matters that need to be resolved in the present application; the Examiner is respectfully requested to contact the undersigned at the telephone number listed below.

The Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment or credit any overpayment to Deposit Account No. 25-0120 for any additional fees required under 37 C.F.R. § 1.16 or under 37 C.F.R. § 1.17.

Respectfully submitted,

YOUNG & THOMPSON



Roland E. Long, Jr., Reg. No. 41,949
745 South 23rd Street
Arlington, VA 22202
Telephone (703) 521-2297
Telefax (703) 685-0573
(703) 979-4709

REL/mjr